excellent self-correlation and mutual correlation characteristics is used, it is possible to obtain N-fold communication channels, permitting the implementation of a CDMA mobile communication system of large channel capacity and high flexibility of channel selection.

Moreover, since there is no need of spreading code management such as arranging specific spreading codes for use in a specific base station, the system management load is alleviated; hence, it is possible to construct a simple-structured and highly reliable system.

Furthermore, when the transmitting device of the base station uses a plurality of different spreading codes, a plurality of information sequences can be transmitted at the same timing by using the spreading codes at the same time—this provides an increased number of communication channels.

Besides, by the spatial re-use of transmitting timing where the transmitting device of two base stations spatially far apart use the same transmitting timing, the entire system is allowed to use an increased number of communication channels—this permits the implementation of a CDMA mobile communication system of large channel capacity and high frequency usage efficiency.

(3) By setting the transmitting timing offset interval in the transmitting device of the base station in accordance with the transmitting power or the cell size, that is, by setting the transmitting timing offset interval small in a base station of small transmitting power or cell size and large in a base station of large transmitting power or cell size, it is possible to avoid overlapping of delay profiles and hence ensure high-quality communication.

We claim:

1. A code division multiple access mobile communication system which uses code division multiple access for communications between a plurality of mobile stations and a base station in each of a plurality of cells wherein a plurality of different sets each of a plurality of different spreading codes are each allotted to said cells, respectively, and a same one of sets of said plurality of different spreading codes is allotted to at least two of the plurality of cells spatially far apart from each other;

the base station in each of said plurality of cells comprising a plurality of transmitting devices each of which spreads a plurality of information sequences with the same one of said spreading codes allotted to the cell to produce a plurality of spread information sequences, delays the plurality of spread information sequences by corresponding delay times, respectively, and then transmits said plurality of delayed spread information sequences, respectively, to said plurality of mobile stations; and

each of said mobile stations in each cell having a receiving device which receives a signal from said base station in said cell, despreads the received signal with one of said spreading codes of one set allotted to the cell to produce a despread signal, and extracts information from said despread signal at one of said transmitting timings corresponding to the respective delay times to reproduce an information sequence.

2. The code division multiple access mobile communication system according to claim **1**, wherein said plurality of delay times to be used by each of said transmitting devices are determined on the basis of the transmitting power of each said transmitting device.

3. The code division multiple access mobile communication system according to claim **1**, wherein said plurality of delay times to be used by each of said transmitting devices of each base station in each cell are determined on the basis of the size of said cell constituting the coverage of said base station.

4. A code division multiple access mobile communication system which uses code division multiple access for communications between a plurality of mobile stations and a base station in each of a plurality of cells wherein a set of different spreading codes is allotted to each of the plurality of cells and a plurality of predetermined delay times corresponding to transmitting timings are each allotted to the respective cells;

said base station in each of said plurality of cells comprising a transmitting device which spreads a plurality of information sequences, respectively, with the different spreading codes of the same set to produce a plurality of spread information sequences, delays the plurality of spread information sequences by one of the delay times allotted to the cell and then transmits said plurality of the delayed spread information sequences, respectively, to said plurality of mobile stations; and

each of said mobile stations in each cell having a receiving device which receives a signal from said base station in said cell, despreads the received signal with one of said different spreading codes of a set allotted to the cell to produce a despread signal, and extracts information from said despread signal at one of a plurality of different timings corresponding to one of the delay times allotted to the cell to reproduce an information sequence.

5. The code division multiple access mobile communication system according to claim **4**, wherein said transmitting devices of said base stations in at least two of said cells, which are spatially far apart from each other, use the same delay time.

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